

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004603**Date Inspected:** 12-Oct-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower**Summary of Items Observed:**

The Quality Assurance (QA) Inspector Gregory Bertlesman arrived on site at the Zhenhua Port Machinery Company facility on Changxing island, China to periodically monitor welding and Quality Control functions. While on site the Quality Assurance Inspector observed and/or discovered the following.

**East Shaft Lift 1**

The Quality Assurance Inspector observed ZPMC continue to perform fit up and tack welding operations between Skin Plate B and E to the adjacent diaphragm plate partial joint penetration welds. The Quality Assurance Inspector observed ZPMC utilizing numerous 10 ton hydraulic jacks to aid in the fit-up.

**South Shaft, Lift 1, Skin C**

The Quality Assurance Inspector observed ZPMC performing fit-up and tack welding operations to the brace plate stiffeners between the longitudinal stiffeners. ZPMC was utilizing several ten ton jacks to aid in the fit-up. Please note the nondestructive testing was completed and accepted by ZPMC for the longitudinal stiffener to skin plate partial and complete joint penetration welds, where the jacks force is being applied. A digital photograph below illustrates the jacks.

**South Shaft, Skin E, Lift 1**

The Quality Assurance Inspector observed ZPMC performing in process welding of brace plate stiffeners to skin plate connection. ZPMC was utilizing the shielded metal arc welding process to produce the fillet weld in the flat and vertical positions.

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## WELDING INSPECTION REPORT

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### South Shaft, Skin D, Lift 1

The Quality Assurance Inspector observed ZPMC performing in process welding of transverse stiffeners to skin plate connection. ZPMC was utilizing the flux cored arc welding process to produce the complete joint penetration weld in the flat and position. The Quality Assurance Inspector questioned ABF Representative Don Walton about the jacks being used while the welding was taking place. Mr. Walton stated the jacks were in place to insure no distortion of the longitudinal stiffeners occurs during the welding process.

### South Shaft, Skin B, Lift 1

The Quality Assurance Inspector performed a random visual inspection of the longitudinal stiffener to skin plate partial and complete joint penetration welds. The Quality Assurance Inspector informed ZPMC of numerous discrepancies observed after ZPMC and ABF had completed there final inspections. ZPMC agreed with the findings and relayed the discrepancies would be repaired.



### Summary of Conversations:

As stated in the contents of the above report.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Joshua Ishibashi 137.6471.0411 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Bertlesman,Greg	Quality Assurance Inspector
<b>Reviewed By:</b>	Wright,Mark	QA Reviewer

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